

ATTORNEY DOCKET NO. P117-US

IN THE SPECIFICATION

Please amend paragraph [0026] as follows.

[0026] The exchange chamber, the etch chamber and valve V3, circulation pump 108, valve V4 and endpoint detector 109 form the outer circulation loop illustrated as a dotted line. The etch chamber, circulation pump 108, valve V5 and endpoint detector form the inner circulation loop as illustrated in another dotted line. The arrows in the figure represent the flow direction of the mixed gases within the etching system. Of course, the flow directions can be reversed, as long as all flow directions within each segment of the flow path are reversed. The circulation pump 108 continuously pumps the gases passing by so as to maintain the circulation via the two loops. The endpoint detector dynamically measures the concentration of a reaction product, such as SiF₄ gas flowing out of the etch chamber and analyzes the measured concentration to obtain the progress information on the etching process inside the etching chamber. In the embodiment of the invention, the endpoint detector is a [[MKS]] Process Sense from MKS (MKS, Inc) that uses Infra-Red light to dynamically measure the concentration of SiF₄. Other detectors, such as a Residual Gas Analyzer from AMETEK (AMETEK Inc.) may also be employed. Valves V3, V4 and V5 switch the gas flow between inner circulation loop and the outer circulation loop. Specifically, the outer circulation is activated by opening (e.g. allowing the gas to flow through) valves V3 and V4, and closing (e.g. blocking the gas to flow through) valve V5. The inner circulation loop is activated by opening valve V5 and closing valves V3 and V4.